

In the Claims

1. (Withdrawn) A prodrug comprising a drug, heparin, and a polymer, wherein the heparin is linked to the polymer, and wherein the drug is linked to the heparin or the polymer.
2. (Withdrawn) The prodrug of claim 1 wherein the drug is selected from the group consisting of antiproliferative, antineoplastic, anti-inflammatory, steroidal anti-inflammatory, non-steroidal anti-inflammatory, antiplatelet, anticoagulant, antifibrin, antithrombin, antimetabolic, antibiotic, antiallergic, antioxidant substances, super oxide dismutases, super oxide dismutases mimics, nitric oxide donors, cytostatic agents, antibodies, progenitor cell capturing antibody, enzymes, prohealing drugs and combinations thereof.
3. (Withdrawn) The prodrug of claim 1 wherein the drug is selected from the group consisting of paclitaxel, docetaxel, estradiol, 4-amino-2,2,6,6-tetramethylpiperidine-1-oxyl (4-amino-TEMPO), tacrolimus, dexamethasone, rapamycin, rapamycin derivatives, 40-*O*-(2-hydroxy)ethyl-rapamycin (everolimus), 40-*O*-(3-hydroxy)propyl-rapamycin, 40-*O*-[2-(2-hydroxy)ethoxy]ethyl-rapamycin, and 40-*O*-tetrazole-rapamycin, ABT-578, clobetasol, aspirin, CD-34 antibody, abciximab (ReoPro), and a combination thereof.
4. (Withdrawn) The prodrug of claim 1, wherein the polymer is poly(L-lysine-co-ethylene glycol) (PLL-co-PEG), poly(L-lysine-co-hyaluronic acid) (PLL-co-HA), poly(L-lysine-co-phosphoryl choline) (PLL-co-PC), poly(L-lysine-co-PVP), poly(ethylimine-co-ethylene glycol) (PEI-co-PEG), poly(ethylimine-co-hyaluronic acid) (PEI-co-HA), poly(ethylimine-co-phosphoryl choline) (PEI-co-PC), poly(ethylimine-co-vinylpyrrolidone) (PEI-co-PVP), poly(L-lysine-g-ethylene glycol) (PLL-g-PEG), poly(L-lysine-g-hyaluronic acid) (PLL-g-HA), poly(L-lysine-g-phosphoryl choline) (PLL-g-PC), poly(L-lysine-g-PVP), poly(ethylimine-g-ethylene

glycol) (PEI-g-PEG), poly(ethylimine-g-hyaluronic acid) (PEI-g-HA), poly(ethylimine-g-phosphoryl choline) (PEI-g-PC), and poly(ethylimine-g-vinylpyrrolidone) (PEI-g-PVP).

5. (Withdrawn) The prodrug of claim 1, wherein the heparin is a molecular heparin, a heparin fragment, a heparin derivative or a heparin complex.

6. (Withdrawn) The prodrug of claim 1, wherein the heparin is modified by a hydrophobic counter-ion.

7. (Withdrawn) The prodrug of claim 1, wherein the heparin is a pentasaccharide.

8. (Original) A medical device comprising as a coating a prodrug of claim 1.

9. (Original) The medical device of claim 8, wherein the drug is selected from the group consisting of antiproliferative, antineoplastic, anti-inflammatory, steroidal anti-inflammatory, non-steroidal anti-inflammatory, antiplatelet, anticoagulant, antifibrin, antithrombin, antimetabolic, antibiotic, antiallergic, antioxidant substances, super oxide dismutases, super oxide dismutases mimics, nitric oxide donors, cytostatic agents, antibodies, progenitor cell capturing antibody, enzymes, prohealing drugs and combinations thereof.

10. (Original) The medical device of claim 8, wherein the drug is selected from the group consisting of paclitaxel, docetaxel, estradiol, 4-amino-2,2,6,6-tetramethylpiperidine-1-oxyl (4-amino-TEMPO), tacrolimus, dexamethasone, rapamycin, rapamycin derivatives, 40-*O*-(2-hydroxy)ethyl-rapamycin (everolimus), 40-*O*-(3-hydroxy)propyl-rapamycin, 40-*O*-[2-(2-hydroxy)ethoxy]ethyl-rapamycin, and 40-*O*-tetrazole-rapamycin, ABT-578, clobetasol, aspirin, and a combination thereof.

11. (Original) The medical device of claim 8, wherein the polymer is poly(L-lysine-co-ethylene glycol) (PLL-co-PEG), poly(L-lysine-co-hyaluronic acid) (PLL-co-HA), poly(L-lysine-co-phosphoryl choline) (PLL-co-PC), poly(L-lysine-co-PVP), poly(ethylimine-co-ethylene glycol) (PEI-co-PEG), poly(ethylimine-co-hyaluronic acid) (PEI-co-HA),

poly(ethylimine-co-phosphoryl choline) (PEI-co-PC), poly(ethylimine-co-vinylpyrrolidone) (PEI-co-PVP), poly(L-lysine-g-ethylene glycol) (PLL-g-PEG), poly(L-lysine-g-hyaluronic acid) (PLL-g-HA), poly(L-lysine-g-phosphoryl choline) (PLL-g-PC), poly(L-lysine-g-PVP), poly(ethylimine-g-ethylene glycol) (PEI-g-PEG), poly(ethylimine-g-hyaluronic acid) (PEI-g-HA), poly(ethylimine-g-phosphoryl choline) (PEI-g-PC), and poly(ethylimine-g-vinylpyrrolidone) (PEI-g-PVP).

12. (Original) The medical device of claim 8, wherein heparin is linked to the polymer.

13. (Original) The medical device of claim 8, wherein the heparin is a molecular heparin, a heparin fragment, a heparin derivative or a heparin complex.

14. (Original) The medical device of claim 8, wherein the heparin is modified by a hydrophobic counter-ion.

15. (Original) The medical device of claim 8, wherein the heparin is a pentasaccharide.

16. (Withdrawn) A method of treating a disorder in a human being by implanting in the human being a medical device as defined in claim 8,

wherein the disorder is selected from the group consisting of atherosclerosis, thrombosis, restenosis, hemorrhage, vascular dissection or perforation, vascular aneurysm, vulnerable plaque, chronic total occlusion, claudication, anastomotic proliferation for vein and artificial grafts, bile duct obstruction, ureter obstruction, tumor obstruction, and combinations thereof.

17. (Withdrawn) A method of treating a disorder in a human being by implanting in the human being a medical device as defined in claim 10,

wherein the disorder is selected from the group consisting of atherosclerosis, thrombosis, restenosis, hemorrhage, vascular dissection or perforation, vascular aneurysm, vulnerable plaque,

chronic total occlusion, claudication, anastomotic proliferation for vein and artificial grafts, bile duct obstruction, ureter obstruction, tumor obstruction, and combinations thereof.